

This paper is filed less than 2 months after the mailing date of the Office Action made Final, and is appropriate for consideration at this stage of the prosecution of the present application.

ARGUMENTS

The Examiner in the subject Office Action of October 29, 2004 continued the rejection of the pending claims 3-12 as being obvious over Applicant's stated prior art in view of U.S. Patent No. 5,797,964 to Carlson et al. (*Carlson*). The Examiner also stated that the arguments regarding nonanalogous art and the lack of motivation to combine the teachings of the references were not persuasive. Applicant respectfully suggests that the reasons stated by the Examiner are contrary to the guidance outlined in the M.P.E.P. and various rulings addressing these issues as will be more fully developed.

Carlson is Not Analogous Prior Art and Cannot be Relied Upon Under 35 U.S.C. 103

The art to which the present invention pertains is that which is related to ceramic oxygen generating systems (COGS). This relevant field of art is different than the art to which the *Carlson* reference pertains: "resistive heating power to a continuous cardiac output monitoring catheter." *Carlson*, col. 1, line 23-25.

"In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be **reasonably pertinent to the particular problem with which the inventor was concerned.**" *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992) [*Emphasis Added*], and see M.P.E.P. § 2141.01(a). A cardiac output monitoring catheter is not in the field of ceramic oxygen generators, nor can *Carlson* be considered to be "reasonably pertinent to the particular problem with which the [Applicant] was concerned."

Applicant describes the problem sought to be solved by the present invention in the first few paragraphs of Applicant's specification.

"For commercial applications, the expense of a variable voltage DC power supply can be prohibitive. An alternative method is described by Phillips, et al. in U.S. Patent No. 5,855,672. The electrical current is switched on and off, varying the proportion of current on time based on a feedback signal. The variation of current on time yields a variable time averaged oxygen output. When a storage plenum is inserted between the ceramic electrolyte and the oxygen output port and the pressure is monitored, a variable

continuous output can be achieved, replenished by the on-off switching according to the usage rate.

"Many commercial applications also call for extended product lifetimes, sometimes in excess of 20,000 hours. During early life testing of Integrated Manifold and Tube (IMAT) or ceramic oxygen generating modules, a strong correlation has been noted between long life and low drive voltages. Applying voltage to modules using full-wave rectified AC as a low cost power source dramatically increased the rate of migration of silver across the electrical isolations that are an integral part of an electrical interconnection system as compared to a DC applied voltage equivalent to the RMS value of the rectified AC voltage. Based on studies using steady DC drive voltages, it has been found that minimizing the peak voltage input to the module is desirable for long COGS product life." (Specification, paragraphs 0005-0006) *[Emphasis Added]*

Similarly, *Carlson* describes the problem solved by the invention disclosed in the '964 patent as follows:

"Particularly, the present invention relates to apparatus and method for electrically heating cardiac blood flow within the heart of a human patient, and for sensing the temperature versus time relationship of the blood flow in the pulmonary artery. The power amplifier provides alternating current electrical power at a particular frequency chosen because of the particular safety of this frequency for the patient, and relative freedom of this frequency from the production of electromagnetic interference which could affect other medical apparatus being used in the treatment of the patient. The alternating power supplied is of variable voltage level to control the energy dissipated in a resistive load from which heat energy is applied to cardiac blood flow. The heat energy is intermittently according to a pseudo random algorithm to provide a temperature transient in the patient's cardiac pulmonary blood flow, which transient is sensed in order to derive a value for cardiac output of the patient." Col. 3, lines 51-67. *[Emphasis Added]*

In the present situation, the power supplies of the applicant's invention and of *Carlson* are in different structures (COGS versus a cardiac monitor catheter), and are also used for different purposes as stated above for each invention. One of ordinary skill in the COGS designer art being faced with the problem of silver migration would look to the solutions of others that have been faced with silver migration problems, not with the problem of providing "alternating current electrical power at a particular frequency chosen because of the particular safety of this frequency for the patient, and relative freedom of this frequency from the production of electromagnetic interference which could affect other medical apparatus being used in the treatment of the patient," as stated in *Carlson*.

The characterization on page 4 of the subject Office Action that *Carlson* “solves the exact same problem” as the problem address by the present invention is not only wrong, but lacks any support in the record in this application.

Further support for the differences in problems faced by the present inventor and Carlson is seen in the “whereby” clause of independent claim 3: “whereby the controller controllably **affects a varying flow of charged particles** across the ceramic membrane.” Again, the main problem solved by the present invention is the migration of silver across the ceramic membrane of the COGS device.

Here There is no Suggestion or Motivation to Modify or Combine the References

“[T]here must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the reference teachings.” M.P.E.P. § 2145.X.C.

Since there are differing natures of the problem to be solved that are being faced between the present invention and in *Carlson*, there can thus be no motivation to use the teachings of *Carlson*.

Further, there is **no suggestion** or any **objective reason** to combine the subject *Carlson* reference with the prior art identified by Applicant to arrive at the claimed invention.

“The mere fact that references can be combined or modified **does not render** the resultant combination obvious **unless** the prior art also suggests the desirability of the combination.” *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990); and, M.P.E.P. § 2143.01. [*Emphasis Added*] Here neither *Carlson*, nor the prior art cited by Applicant, suggest the desirability of the combination.

The Office Action states: “it would have been obvious to have added the variable-voltage circuitry of Carlson et al to the apparatus of Applicant’s admission because the precise control of voltage would allow for precise control of gas generation in the electrochemical system.” Office Action, pp 2-3.

There is no support for this conclusion. The M.P.E.P. § 2143.01 suggests “the importance of relying on **objective evidence** and making **specific factual findings** with respect to the motivation to combine references.” Here the subject Office Action of October 29, 2004 (and prior Office Actions in this application) is wholly devoid of such evidence or findings. All

that is presented is the unsubstantiated conclusions of the Examiner reached after having the benefit of the disclosure from the subject application.

Further, "[a]lthough a prior art device 'may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.'" *In re Mills*, 916 F.2d at 682, 16 USPQ2d at 1432) [*Emphasis Added*], and M.P.E.P. § 2143.01.

As quoted above, Applicant cites a means (*Phillips et al.*) for precise voltage control (and subsequently gas generation) using modulation of a fixed voltage, which is simpler and more cost effective than the circuitry of *Carlson*. Contrary to the Office Action, page 5, addition of variable voltage circuitry as described by *Carlson* is not necessary for precise control of oxygen delivery.

CONCLUSION

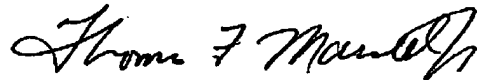
Carlson is in a nonanalogous art, and should not be applied as a reference to the present invention relating to COGS.

The problem to be solved by the present invention is different than the nature of the problem to be solved by *Carlson*. Therefore, there is no motivation to combine the references.

Further, the subject Office Action of October 29, 2004 is wholly devoid of any evidence or specific factual findings with respect to the motivation to combine references.

If there are matters which can be discussed by telephone to further the prosecution of this Application, Applicants invite the Examiner to call the attorney at the number listed below at the Examiner's convenience.

Respectfully submitted,



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